

Canadian Radium & Uranium Site - Cost Estimate

Task: Weston Solutions, Inc., Superfund Technical Assessment & Response Team V (START V) is potentially being tasked with providing two Core Response Team (CRT) members and subcontracted drilling/utility markout and radon testing firms to conduct a subsurface soil and radon investigation at the Canadian Radium & Uranium Site (the Site) located in Mount Kisco, New York. The scope of work for the potential project would include using Geoprobe technology to advance up to 10 soil borings to a maximum depth of 8 feet below ground surface (bgs); the collection of up to 80 soil samples from the advanced borings to be submitted to a START V-procured laboratory for radiological parameter analyses (standard turnaround time); the deployment and analysis of up to six radon canister samples by a subcontracted radon specialist; and gamma screening of the general area of the investigation.

Some assumptions were made to complete the cost estimate for the level of effort outlined above. It is assumed that the drilling work will be completed over a two night period. In addition, it is assumed that the cost for subcontracting the drilling and utility markout will be significantly higher than historical daily rates due to the night work. It is assumed that two CRT members would be deployed for this sampling event. It is assumed that all work will be completed over a three day period (radon samples require 72 hour deployment). It is assumed that each CRT member will work 10 hour days for each of the three days on-site. It is unknown whether an EPA laboratory (NAREL) will accept the soil samples so it is assumed that START V will need to procure the laboratory services and complete the data validation of the results.

The following is the START V cost estimate based on the level of effort described above:

Labor: All labor costs are based on a \$110.00 per hour rate (the average START V labor rate applied to the contract).

Field Preparations = 50 hours x \$110.00 = \$5,500.00

Field work (3 days at 10 hours per day x 2 people) = 60 hours x \$110.00 = \$6,600.00

Data Validation = 100 hours x \$110.00 = \$11,000.00

Post Field Work/Reporting = 75 hours x \$110.00 = \$8,250.00

Total Labor Cost = \$31,350.00

Expenses: Expenses are broken down by five specific cost areas (subcontracted services, equipment rental, field expendables, vehicle rental, and travel cost). A markup of 5% is the contractually-agreed markup on all expenses.

Subcontracted Drilling and Utility Markout Services: Advance up to 10 soil borings to a maximum depth of 8 feet bgs. To be completed over an estimated 2 night period.

Estimated Subcontract Cost = \$12,000 x 5% markup = \$12,600.00

Subcontracted Laboratory Services: Subcontracted radon specialist and radon analysis for up to six radon samples and radiological parameter analyses (standard turnaround time) for the up to 80 soil samples to be collected.

Radon Subcontracting and Analysis = \$90.00 per sample x 6 samples = \$540.00 x 5% markup = \$567.00

Radiological Parameter Analyses (Soil) = \$180.00 per sample x 80 samples = \$14,400.00 x 5% markup = \$15,120.00

Total Subcontracted Services Cost = \$15,687.00

Equipment Rental:

It is assumed that the radiological survey instrumentation will be provided by EPA as historically done. The only rental equipment envisioned for this project would be a GPS unit for the 3 days.

GPS Unit = 3 days x \$79.97 per day = \$239.91 x 5% markup = \$251.91

Total Equipment Rental Cost = \$251.91

Field Expendables: Field expendables will consist of PPE, bottleware, *etc.* The field expendables cost is estimated.

Total Estimated Field Expendables Cost = \$1,000.00

Vehicle Rental: It is assumed that only one rental vehicle would be required to complete the field work.

Rental Rate = \$85.00 per day.

3 days x \$85.00 per day = \$255.00 x 5% markup = \$267.75

Total Vehicle Rental Cost = \$267.50

Travel Cost: The per diem rate for Westchester County, New York is \$145.00 for lodging and \$76.00 for M&IE. It is assumed that there would be approximately \$25.00 in taxes for the lodging per night so the nightly lodging cost is estimated at \$170.00.

Lodging: 2 Nights x 2 People x \$170.00 = \$680.00 x 5% markup = \$714.00

M&IE: 3 Field Days x 2 People x \$76.00 = \$456.00 x 5% markup = \$478.80

Total Travel Cost = \$1,192.80

Total Cost Estimate = \$49,749.21

Comments: This cost estimate was generated using a lot of assumptions due to the lack of information currently available. The cost estimate breakdown above is the worst case scenario and includes all of the potential cost that could be incurred. There are certain factors that are unknown at this time which could significantly reduce the total cost for the assignment. For instance, if the analytical services for the soil samples and associated data validation were accepted through an EPA laboratory (NAREL) it would reduce the START V cost by approximately \$26,120.00 (\$23,629.21).